

## Contributors to This Issue

E. T. BAYLISS, B.S.E.E., 1961, and M.S., 1962, both from Oregon State University; Bell Telephone Laboratories, 1962—. Mr. Bayliss has worked on methods of antenna pattern synthesis with special application to large array antennas. He is engaged in system engineering and design of radars and interceptors for ballistic missile defense. Member, Eta Kappa Nu, Pi Mu Epsilon, Sigma Tau, IEEE.

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TA-SHING CHU, B.S., 1955, National Taiwan University; M.S., 1957, and Ph.D., 1960, Ohio State University; Bell Telephone Laboratories, 1963—. Mr. Chu has been concerned with problems involving electromagnetic wave propagation and microwave antennas. Member, IEEE, Commission 2 of URSI, American Physical Society, Sigma Xi, Pi Mu Epsilon.

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D. C. HOGG, B. Sc., 1949, University of Western Ontario; M. Sc., 1950, Ph.D., 1953, McGill University; Bell Telephone Laboratories, 1953—. His work has included studies of artificial dielectrics for microwaves, diffraction of microwaves, and over-the-horizon, millimeter wave and optical propagation. Fellow, IEEE; member, Commission 2 of URSI, Sigma Xi, AAAS.

AMOS E. JOEL, JR., B.S., 1940, and M.S., 1942, Massachusetts Institute of Technology; Bell Telephone Laboratories, 1940—. Mr. Joel did relay engineering, crossbar system testing, fundamental development studies of telephone switching systems, design of circuits for early relay digital computers, and preparation of texts to teach switching design.

Later he was concerned with designing automatic message accounting computer circuits, making fundamental engineering studies of new switching systems, and was head of a department responsible for the development planning of the Bell System's first electronic telephone switching systems. Mr. Joel was Director of Bell Laboratories' Common Systems Switching Laboratory from 1961 to 1967. Mr. Joel is now a Switching Consultant at Bell Laboratories. He holds some 50 patents, among which is the largest U. S. patent ever issued (its 884 pages cover a machine to automatically compute the cost of each toll call).

He has been active in national and local IEEE affairs, is a member-at-large of its Communication Technology Group, chairman of its Meetings Committee, and member of its Communication Switching Committee. Member, Sigma Xi, Association for Computing Machinery, AAAS.

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